

# Notice of Allowability

Application No.

09/994,945

Examiner

Brandon S. Bludau

Applicant(s)

CANGIANI ET AL.

Art Unit

2132

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/16/2007.
2. ☒ The allowed claim(s) is/are 1, 13, 14, 16, 17 and 19-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

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### DETAILED ACTION

1. This action is in response to amendment filed 3/16/2007. Claims 1, 13,16,19,24,28 and 29 have been amended. Claims 30 and 31 are new. Claims 1,13,14,16,17 and 19-31 are pending.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

#### **Claim 30:**

A method for communication between a transmitter and an authorized receiver, comprising:

at the transmitter:

generating a pseudorandom noise sequence;

modulating a carrier signal with the pseudorandom noise sequence to produce a modulated signal;

boosting a transmit power during finite length pulses of the modulated signal to produce a transmit signal, ~~with~~ wherein each pulse encompasses a plurality of code chips and such that individual pulses ~~having~~ have different durations and time interval spacings between them, wherein the durations and time interval spacings are controlled

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by a cryptographic sequence, known only to the transmitter and to authorized receivers, and represents synchronization information for the transmit signal;

transmitting the transmit signal to the receiver;

at the authorized receiver:

receiving the transmit signal and producing a received signal;

detecting the individual pulses in the received signal;

determining durations of time intervals between successive pulses; and

acquiring synchronization to the transmit signal based on the durations of the time intervals using knowledge of said cryptographic sequence used to define said time intervals at the transmitter.

**Claim 31:**

A communication system comprising a transmitter and an authorized receiver, wherein the transmitter comprises:

a code generator configured to generate a pseudorandom noise sequence;

a modulator that modulates a carrier signal with the pseudorandom noise sequence to produce a modulated signal;

a cryptographic unit that generates a cryptographic sequence based on a cryptographic key; and

an amplifier connected to the modulator and the cryptographic unit, wherein the amplifier amplifies the modulated signal to a higher level during short bursts of time that are separated in time, wherein time intervals between successive short bursts are

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determined based on said cryptographic sequence known only to the transmitter and to authorized receivers, and represents synchronization information for the transmit signal;

wherein the authorized receiver comprises:

a cryptographic unit that generates a cryptographic sequence that matches the cryptographic sequence used in said transmitter; and

a correlator that is configured during an acquisition mode to match only to higher power portions of the sequence having time intervals between higher power bursts based on said cryptographic sequence in order to acquire synchronization to said transmit signal, and said correlator ignoring lower power portions of the sequence until synchronization is acquired, and thereafter switching to a tracking mode whereby said correlator correlates to the entire pseudorandom noise sequence including lower power portions.

The following is an examiner's statement of reasons for allowance: The claims are allowable over the prior art of record due to the requirement of a receiver having knowledge of the cryptographic sequence used for transmitting the synchronization signal, wherein the receiver uses this knowledge to decode a received signal in order to acquire synchronization to the transmitted signal, wherein the received signal contains a plurality of high powered pulses, higher than the generated PN code, such that the duration of the pulses and spacing between high powered pulses are determined by the cryptographic sequence.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S. Bludau whose telephone number is 571-272-3722. The examiner can normally be reached on Monday -Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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